

REMARKS/ARGUMENTS

In response to the requirement for a new declaration, applicants enclose a fresh declaration duly executed identifying the application by serial number and filing date.

With respect to the last paragraph on page 2 of the Action suggesting amendment to the drawings to include reference numerals b2 and b3, those reference numerals have been deleted from the specification. A corrected drawing sheet is also attached to this amendment deleting the dashed lines which interconnect drawing Figures 1 and 2.

With respect to the specification, the reference to claim 1 on page 4 has been deleted. Also since claims 3 and 7 have been cancelled, the comments at the top of page 4 of the Office Action are believed cured.

With respect to the claim objections, originally presented claims 1-9 have been cancelled in favor of a single claim 11 and it is believed that claim cures those objections.

The rejection of claims 1-9 based on 35 U.S.C. §112 on grounds of indefiniteness in that the claims recite "blading with blades" is respectfully traversed. The blading refers to the entirety of the blades of the diffuser and the term "blades" refers individually to the blades which comprise the blading of the diffuser. The term "blading" thus refers collectively to the blades and it is believed thus proper to identify blading as including a plurality of blades as in claim 11. With respect to the ranges set forth in the claim 1, it is believed that the previously referenced "extreme values" clearly indicated the values at the end of the recited ranges. Nonetheless, applicants have modified the corresponding recitation in claim 11 by including a range between certain parameters including end values of that range.

The rejection of claims based on 35 U.S.C. 102(b) as anticipated by Bandukwalla 4,850,795; Bandukwalla U.S. patent N. 4,824,325; Masutani U.S. patent No. 6,607,353; the article title "A Study on Centrifugal Impeller and Diffuser Flow"; Seleznev U.S. patent No. 3,973,872 and Nishida U.S. patent No. 5,228,832 are respectfully traversed. Claim 11 essentially incorporates the limitations set forth in prior claims 1, 2, 3, 4, and 5. Since none of these rejections referenced claim 5, it is clear that the bases for the rejection, i.e. these various references under 35 U.S.C. 102 no longer applies. Similarly the rejection of claim 7 as unpatentable over Bandkuwalla U.S. patent 4,850,795 or Kobayashi U.S. patent No. 4,938,661 is no longer applicable since the subject matter of prior claim 7 is not currently being claimed.


The rejection of the original claims 1, 4-6 and 9, to the extent the subject matter of those claims has been carried over into new claim 11, as anticipated by Kobayashi U.S. patent No. 4,938,661 under 35 U.S.C. 102(b) is respectfully traversed. In claim 11, two ratios are provided vis á vis the outer diameter of the impeller D2. The first ratio is a ratio between a diameter of the intake edge Dp in of the blading and the outer diameter D2 of the impeller and which ratio lies in a range of 1.04 and 1.14. The Examiner refers to a similar ratio in Kobayashi as in a range of 1.03-1.1. Apparently the Examiner is utilizing the values given in Table I for the fourth stage to arrive at one of the end values of the ratio of 1.03, i.e., from Table I, fourth stage, 77.5/75. For the other end value of the ratio, i.e., 1.1, the Examiner is apparently relying on the first stage ratio of 93.5/85 given in Table 1. Thus, the range of 1.04 - 1.14 set forth in claim 11 as the ratio between a diameter of the intake edge and the outer diameter of the impeller is not supplied by Kobayashi in a blade of a single stage. In other words, the ratio given by the Examiner applies to different blades of different stages.

Similarly, claim 11 requires a ratio between a diameter of an outlet edge D_p out of the blading and an outer diameter of the impeller D_2 to lie in a range between 1.25 and 1.35. While the Examiner states that the ranges of the ratio in Kobayashi is 1.26 and 1.131, these ratios likewise are for the blades of different stages of the compressor as set forth in Table 1 of Kobayashi. The ratios provided by the Examiner are simply not applicable to a single set of blades but rather apply to blades of various stages. Simply because the Examiner has bracketed the claimed ratios with numerical ratios of leading and trailing edges to the outer diameter of blades in different stages does not mean that providing such ratios in a single set of blades in a single stage would have been suggested to a person of ordinary skill in the art. Thus, applicants believe the claim clearly distinguishes from and is patentable over the applied Kobayashi reference.

Accordingly, reconsideration and allowance of the claim currently pending in the application is respectfully requested.

Respectfully submitted,

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